

Special Master's Proposed Construction of Disputed Terms					
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Defendants' Proposed Construction	Defendants' Evidence	Special Master's Construction
		<p>Claim 1, Col. 9, ll. 13-30 (storage router "allow[s] access from <u>devices</u> connected to the first transport medium to the storage devices using native low level, block protocols" (emphasis added)); the storage router, specifically, the supervisor unit within the storage router, "uses" the NLLBP to permit or enable access).</p> <p>Abstract; Col. 2, ll. 12-15, 17-20, 24-27; Col. 3, ll. 59-63; Col. 3, ll. 51-53; Col. 4, ll. 2-6; Col. 5, ll. 1-5; Col. 9, ll. 28-31; Col. 10, ll. 9-11 (specification discloses that NLLBPs are used by, and at, the storage router to allow access).</p> <p>Col. 6, ll. 33-41, 46-56 (specification describes two embodiments wherein "devices" making the storage access request are servers).</p> <p>April 6, 2005 Reply to Office Action at 10-11,</p>			

Special Master's Proposed Construction of Disputed Terms				
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Defendants' Proposed Construction	Defendants' Evidence
		<p>Fore Decl. ISO</p> <p>Crossroads' Post-Hr'g Cl. Const. Br., Ex. E; July 22, 2005 Reply to Office Action at 24-27, Fore Decl. ISO</p> <p>Crossroads' Post-Hr'g Cl. Const. Br., Ex. F (Crossroads distinguished Petal, Spring and Oeda as having a server that provided controlled access to storage was required to translate high level file system commands into low level commands in order to send the NLLBP to the storage devices).</p> <p>April 6, 2005 Reply to Office Action at 8-11, 19, 22-23, Fore Decl. ISO</p> <p>Crossroads' Post-Hr'g Cl. Const. Br., Ex. E; July 22, 2005 Reply to Office Action at 11-17, 21-28, Fore Decl. ISO</p> <p>Crossroads' Post-Hr'g Cl. Const. Br., Ex. F (showing that Crossroads did not make a sweeping disclaimer of <i>any</i> use of a "network server"; Crossroads distinguished its</p>		

Special Master's Proposed Construction of Disputed Terms

Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Defendants' Proposed Construction	Defendants' Evidence	Special Master's Construction
		<p>invention from Oeda, Petal and Spring based on the requirement that the "network server" that provided controlled access to storage was required to translate the high level file system command into low level commands in order to send the NLLBP to the storage device, not the use of Ethernet networks, Ethernet or TCP/IP).</p> <p>Col. 2, ll. 17-20; Col. 5, ll. 19-22, 50-57, 60-63; Col. 6, ll. 32-37; '147 Patent, Claim 1, Col. 9, ll. 28-32 (disclosing and claiming embodiments using Fibre Channel; the inclusion of "without involving . . . network protocols" according to Defendants' expert would prohibit the use of Fibre Channel despite the fact that these are express embodiments).</p> <p>Col. 5, ll. 53-56 (Fibre Channel is a protocol used for communications over "Fibre Channel based networks").</p>			

Special Master's Proposed Construction of Disputed Terms				
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Defendants' Proposed Construction	Defendants' Evidence
		<p>Col. 1, ll. 42-53; Col. 3, ll. 16-24; Col. 5, ll. 1-5 (specification notes that NLLBPs do not involve overhead of high level network protocols or file systems).</p> <p>Col. 6, ll. 31-41, 46-56 (specification has two distinct embodiments in which the "devices" making storage requests are servers).</p> <p>Extrinsic:</p> <p>March 7, 2011 Supp. Decl. of John Levy, Ph.D., ¶2; March 7, 2011 Decl. of Brian Berg ¶42 (experts agree that "NLLBP" is not a term of art).</p> <p>Hr'g Tr. at 121:8-16, March 8, 2011 (parties agree that "NLLBP" should be construed as a single term, consistent with use in specification)</p> <p>March 7, 2011 Supp. Decl. of John Levy, Ph.D., ¶13 (Ethernet and TCP/IP protocols are</p>		

Special Master's Proposed Construction of Disputed Terms					
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Defendants' Proposed Construction	Defendants' Evidence	Special Master's Construction
		<p>concerned only with delivery of messages).</p> <p>March 7, 2011 Decl. of Brian Berg ¶48 (a SCSI command would be a low level command).</p> <p>March 7, 2011 Decl. of Brian Berg, ¶37 (states that "low level" means "without involving . . . file system protocols.").</p> <p>April 28, 2011 2d Supp. Decl. of John Levy, Ph.D., ¶14 (person of ordinary skill would understand that the specification discloses a server that sends requests for storage access to a storage router using NLLBP).</p> <p>Hr'g Tr. 76:4-10, 82:20-23, March 8, 2011 (in hypothetical network of Graphic 2 of Defendants' Markman Demonstratives (Fore Decl. ISO Pl's Post-Hr'g Cl. Const. Br., Ex. J) the workstation sends high level file systems commands to network server); <i>Id.</i> at 200:2-5.</p>			

Special Master's Proposed Construction of Disputed Terms				
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Defendants' Proposed Construction	Defendants' Evidence
		<p>201:22-24, 202:24-203:3 (Defendants expressly stated that a "device" is a "computer" that is both "reading or writing data from a storage device" and sending NLLBPs and the only "device" that does so in Graphic 2, shown in Crossroads' Post-Hearing Brief is the "network server").</p> <p>Crossroads' Concise Statement of Infringement, <i>Dot Hill</i> Litigation (Case No. A-03-CV-754 SS), Fore Decl. ISO Pl.'s Post-Hr'g Cl. Const. Br., Ex. H; April 28, 2011 2d Supp. Decl. of John Levy, Ph.D., ¶15 (accused devices in <i>Dot Hill</i> litigation were designed to be used in hypothetical system shown in Graphic 2 of Defendants' Markman Demonstratives (Fore Decl. ISO Pl.'s Post-Hr'g Cl. Const. Br., Ex. J)).</p> <p>Hr'g Tr. at 81:12-15, March 8, 2011 (all parties agree that the Petal, Spring and Oeda</p>		

Special Master's Proposed Construction of Disputed Terms					
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Defendants' Proposed Construction	Defendants' Evidence	Special Master's Construction
		references disclose systems with a "server" interposed between workstations and storage devices); <i>Id.</i> at 88:2-89:16; 93:4-7; 100:16-24 (Defendants agree that the "translation" distinguished by patentees during reexamination was from high level file system commands into NLLBP requests); <i>Id.</i> at 89:11-16 (parties agree that "allowing access . . . using NLLBP" occurs without a translation from a high level file system command to a NLLBP request); <i>Id.</i> at 91:14-16, 92:1-5, 152:4-7 (Defendants concede that the "network protocols" described in the Oeda, Petal and Spring references included file system commands thus, including "without involving . . . network protocols" is superfluous to "without involving a translation from a high level file system command to a native low			

Special Master's Proposed Construction of Disputed Terms					
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Defendants' Proposed Construction	Defendants' Evidence	Special Master's Construction
		level block protocol request.”)			
		April 28, 2011 2d Supp. Decl. of John Levy, Ph.D., ¶7 (CIFS, NFS and FTP are network protocols).			
		March 7, 2011 Decl. of Brian Berg, ¶37 (Defendants' expert uses term “network protocol” broadly such that it would include Fibre Channel).			
		April 28, 2011 2d Supp. Decl. of John Levy, Ph.D., ¶6 (under Defendants' construction, a protocol used for communication over "Fibre Channel based networks" would be a network protocol).			
		February 22, 2011 Decl. of John Levy, Ph.D., ¶¶ 31, 33 (NLLBPs do not have the overhead associated with the use of higher level protocols to access storage); <i>Id.</i> ¶ 34 (specification describes network servers communicating			

Special Master's Proposed Construction of Disputed Terms					
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Defendants' Proposed Construction	Defendants' Evidence	Special Master's Construction
		with storage using NLLBPs).			
Claim 15 The apparatus of claim 14, wherein the supervisor unit is further operable to maintain a configuration wherein the configuration includes the map between the device and the remote storage device, and further wherein the map includes virtual LUNs that provide a representation of the storage device.	Configuration: “A modifiable setting of information.”	Configuration: Intrinsic: Col. 2, ll. 19-23; Col. 5, ll. 53-54; Col. 6, ll. 58-64 (describing “configuration” as information used to control operation of the storage router and which is modifiable). ‘147 Patent: Col. 2, ll. 28-32; Col. 9, ll. 36-41 (“configuration” can also include mapping information and additional information, such as information needed to “implement[] access controls”). Claim 15, Col. 11, ll. 23-28 (the limitation “operable to maintain a configuration wherein the configuration includes a map. . .” would be meaningless under Defendants' proposed construction).	Configuration: “Map”; otherwise indefinite.	<i>See claim 1, supra.</i>	No Construction Necessary.

Special Master's Proposed Construction of Disputed Terms					
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Defendants' Proposed Construction	Defendants' Evidence	Special Master's Construction
		<p>Extrinsic:</p> <p><i>Chaparral</i> Markman Order at 16, Fore Decl. ISO Crossroads' Cl. Const. Br., Ex. L (parties to earlier action agreed to construe "maintain a configuration" to mean "keeping a modifiable setting of information"); February 22, 2011 Decl. of John Levy, Ph.D., ¶46 (person of ordinary skill would understand "maintaining a configuration" to mean "keeping a modifiable set of information").</p>			
The apparatus of claim 14, wherein the supervisor unit is further operable to maintain a configuration wherein the configuration includes the map between the device and the remote storage device, and further wherein the map includes virtual LUNs that provide a representation of the storage device.	<p>Device:</p> <p>"Computing device that issues storage access requests."</p>	<p>Device:</p> <p>Claim 1, Col. 9, ll. 27-30 ("devices" refers to the devices that make requests and are allowed access to storage devices).</p> <p>Col. 1, ll. 36-37; Col. 2, ll. 4-5; Col. 4, ll. 55-56; Col. 8, ll. 65-68 (the specification describes the devices that make requests to access the storage devices as</p>	<p>Device:</p> <p>Computer.</p>	<p><i>See '035 patent, claim 1.</i></p>	No Construction Necessary.

Special Master's Proposed Construction of Disputed Terms				
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Defendants' Proposed Construction	Defendants' Evidence
		<p>"computing devices").</p> <p>Col. 1, ll. 57-60 ("from the perspective of a workstation, or other computing device, seeking to access such server data, the access is much slower than access to data on a local storage device").</p> <p>Claim 3, Col. 9, ll. 37-39 (principles of claim differentiation require "devices," as a group, must necessarily be broader than "workstations").</p> <p>Col. 6, ll. 31-41, 46-56 (the specification describes "servers" as a type of computing device that can make storage access requests).</p> <p>Abstract, Col. 1, ll. 21-24, ll. 36-37, ll. 53-56; Col. 2, ll. 4-6; Col. 3, ll. 3-6, 41-43; Col. 4, ll. 38-42, ll. 55-56 Col. 6, ll. 45-55; Col. 8, ll. 65-68 ("devices" is used broadly to refer to various computing devices such as</p>		

Special Master's Proposed Construction of Disputed Terms				
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Defendants' Proposed Construction	Defendants' Evidence
		<p>workstations, input/output devices, "initiator" and "target" devices).</p> <p>April 6, 2005 Reply to Office Action at 8, 10, 12, 22, Fore Decl. ISO Crossroads' Post-Hr'g Cl. Const., Ex. E; July 22, 2005 Reply to Office Action at 7-15, 21-23, 27-29, 32, 33, 35-37, 39, Fore Decl. ISO Crossroads' Post-Hr'g Cl. Const. Br., Ex. F ("Device" is used over ninety times in the reexamination prosecution history to refer to types of devices capable of making requests for storage).</p> <p>Extrinsic:</p> <p>April 28, 2011 2d Supp. Decl. of John Levy, Ph.D., ¶ 4 (one of ordinary skill would understand that in the embodiments at Col. 6, ll. 33-41; 46-56, it is the server that sends requests for storage access to the storage router using NLLBP).</p>		

Special Master's Proposed Construction of Disputed Terms					
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Defendants' Proposed Construction	Defendants' Evidence	Special Master's Construction
		(defining "server" as "(1) on a local area network (LAN), a computer running administrative software that controls access to the network and its resources, such as printers and disk drives, and provides resources to computers functioning as workstations on the network"). Special Master's Report at 22, <i>Dot Hill</i> Litigation, Pl.'s Cl. Const. Hr'g Ex. P-15 (Court previously construed "storage router" as "a data transmitting device that allows users to integrate different servers or workstations into a storage network").			
Claim 16:					
The apparatus of claim 15, wherein the map only exposes the device to LUNs that the device may access.	Device: "Computing device that issues storage access requests."	Device: Intrinsic: Claim 1, Col. 9, ll. 27-30 ("devices" refers to the devices that make requests and are allowed access to storage	Device: Computer.	See '035 patent, claim 1.	No Construction Necessary.

Special Master's Proposed Construction of Disputed Terms					
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Defendants' Proposed Construction	Defendants' Evidence	Special Master's Construction
		<p>devices).</p> <p>Col. 1, ll. 36-37; Col. 2, ll. 4-5; Col. 4, ll. 55-56; Col. 8, ll. 65-68 (the specification describes the devices that make requests to access the storage devices as "computing devices").</p> <p>Col. 1, ll. 57-60 ("from the perspective of a workstation, or other computing device, seeking to access such server data, the access is much slower than access to data on a local storage device ").</p> <p>Claim 3, Col. 9, ll. 37-39 (principles of claim differentiation require "devices," as a group, must necessarily be broader than "workstations").</p> <p>Col. 6, ll. 31-41, 46-56 (the specification describes "servers" as a type of computing device that can make storage access requests).</p> <p>Abstract, Col. 1, ll. 21-</p>			

Special Master's Proposed Construction of Disputed Terms				
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Defendants' Proposed Construction	Defendants' Evidence
		<p>24, ll. 36-37, ll. 53-56; Col. 2, ll. 4-6; Col. 3, ll. 3-6, 41-43; Col. 4, ll. 38-42, ll. 55-56 Col. 6, ll. 45-55; Col. 8, ll. 65-68 ("devices" is used broadly to refer to various computing devices such as workstations, input/output devices, "initiator" and "target" devices).</p> <p>April 6, 2005 Reply to Office Action at 8, 10, 12, 22, Fore Decl. ISO Crossroads' Post-Hr'g Cl. Const., Ex. E; July 22, 2005 Reply to Office Action at 7-15, 21-23, 27-29, 32, 33, 35-37, 39, Fore Decl. ISO Crossroads' Post-Hr'g Cl. Const. Br., Ex. F ("Device" is used over ninety times in the reexamination prosecution history to refer to types of devices capable of making requests for storage).</p> <p>Extrinsic:</p> <p>April 28, 2011 2d Supp. Decl. of John Levy,</p>		

Special Master's Proposed Construction of Disputed Terms				
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Defendants' Proposed Construction	Defendants' Evidence
		<p>Ph.D., ¶ 4 (one of ordinary skill would understand that in the embodiments at Col. 6, ll. 33-41; 46-56, it is the server that sends requests for storage access to the storage router using NLLBP).</p> <p>The McGraw-Hill Illustrated Dictionary of Personal Computers 126 (4th ed. 1995), Fore Decl. ISO Crossroads' Cl. Const. Br., Ex. W (defining device as "a mechanical, electrical or electromechanical contrivance or appliance. Commonly used in reference to peripherals such as printers, CRTS and disk drives").</p> <p>Hr'g Tr. at 202:24-203:3, 205:4-7, Mar. 8, 2011 (Defendants' counsel agreeing that the defining characteristic of a device is that it is the thing that issues storage requests).</p> <p>May 11, 2011 3d Supp. Decl. of John Levy, Ph.D., ¶3 (a "network</p>		

Special Master's Proposed Construction of Disputed Terms					
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Defendants' Proposed Construction	Defendants' Evidence	Special Master's Construction
		<p>server" is a server that can request access to storage).</p> <p>Microsoft Computer Dictionary 430 (3d Ed. 1997), May 11, 2011 3d Supp. Decl. of John Levy, Ph.D., Ex. A (defining "server" as "(1) on a local area network (LAN), a computer running administrative software that controls access to the network and its resources, such as printers and disk drives, and provides resources to computers functioning as workstations on the network").</p> <p>Special Master's Report at 22, <i>Dot Hill</i> Litigation, Pl.'s Cl. Const. Hr'g Ex. P-15 (Court previously construed "storage router" as "a data transmitting device that allows users to integrate different servers or workstations into a storage network").</p>			

Special Master's Proposed Construction of Disputed Terms					
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Defendants' Proposed Construction	Defendants' Evidence	Special Master's Construction
Claim 17:					
The apparatus of claim 14, wherein the supervisor unit is further operable to maintain a configuration including the map, wherein the map provides a mapping from a host device ID to a virtual LUN representation of the remote storage device to a physical LUN of the remote storage device.	Configuration: “A modifiable setting of information.”	Configuration: Intrinsic: Col. 2, ll. 19-23; Col. 5, ll. 53-54; Col. 6, ll. 58-64 (describing “configuration” as information used to control operation of the storage router and which is modifiable). ‘147 Patent: Col. 2, ll. 28-32; Col. 9, ll. 36-41 (“configuration” can also include mapping information and additional information, such as information needed to "implement[] access controls"). Claim 15, Col. 11, ll. 23-28 (the limitation “operable to maintain a configuration wherein the configuration includes a map. . .” would be meaningless under Defendants' proposed construction). Extrinsic: <i>Chaparral Markman</i>	Configuration: “Map”; otherwise indefinite.	<i>See claim 1, supra.</i>	No Construction Necessary.

Special Master's Proposed Construction of Disputed Terms					
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Defendants' Proposed Construction	Defendants' Evidence	Special Master's Construction
		Order at 16, Fore Decl. ISO Crossroads' Cl. Const. Br., Ex. L (parties to earlier action agreed to construe "maintain a configuration" to mean "keeping a modifiable setting of information"); February 22, 2011 Decl. of John Levy, Ph.D., ¶46 (person of ordinary skill would understand "maintaining a configuration" to mean "keeping a modifiable set of information").			
Claim 18:					
The apparatus of claim 14, wherein the remote storage device further comprises storage space partitioned into virtual local storage for the device connected to the first transport medium.	Device: "Computing device that issues storage access requests."	Device: Intrinsic: Claim 1, Col. 9, ll. 27-30 ("devices" refers to the devices that make requests and are allowed access to storage devices). Col. 1, ll. 36-37; Col. 2, ll. 4-5; Col. 4, ll. 55-56; Col. 8, ll. 65-68 (the specification describes the devices that make requests to access the storage devices as "computing devices").	Device: Computer.	<i>See '035 patent, claim 1.</i>	No Construction Necessary.